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BEST AVAILABLE COPY

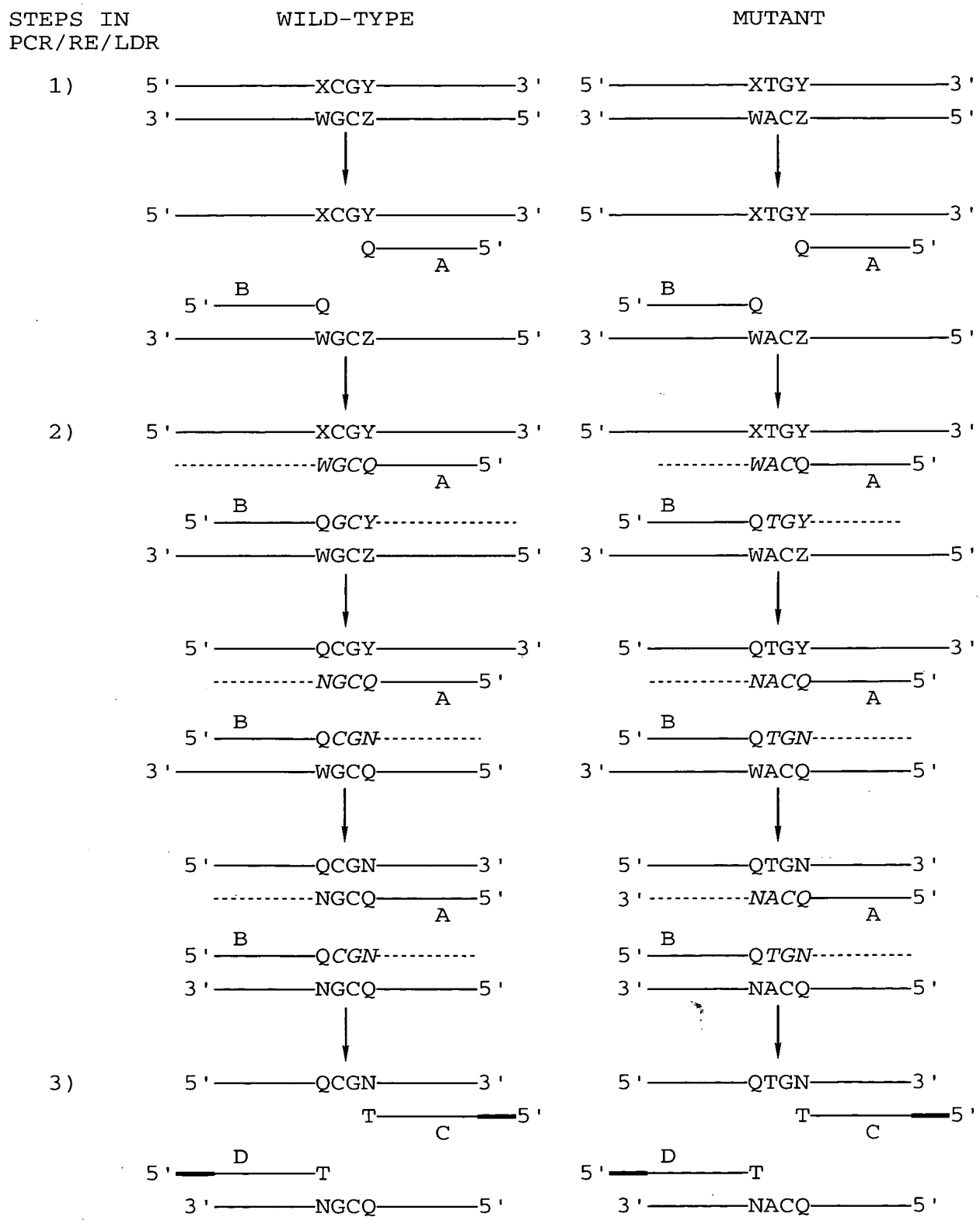


*FIG. 1A*

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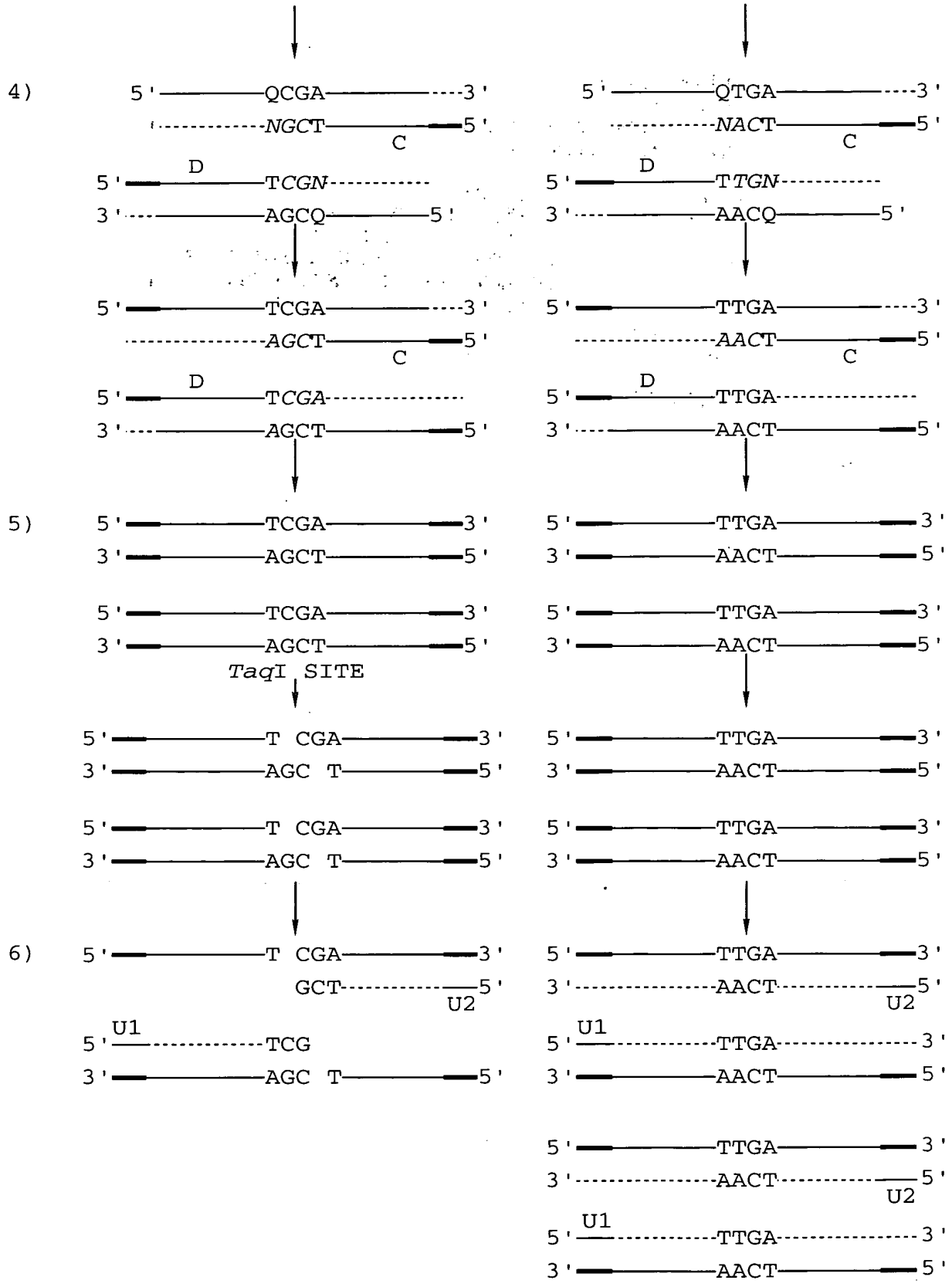


*FIG. 1B*

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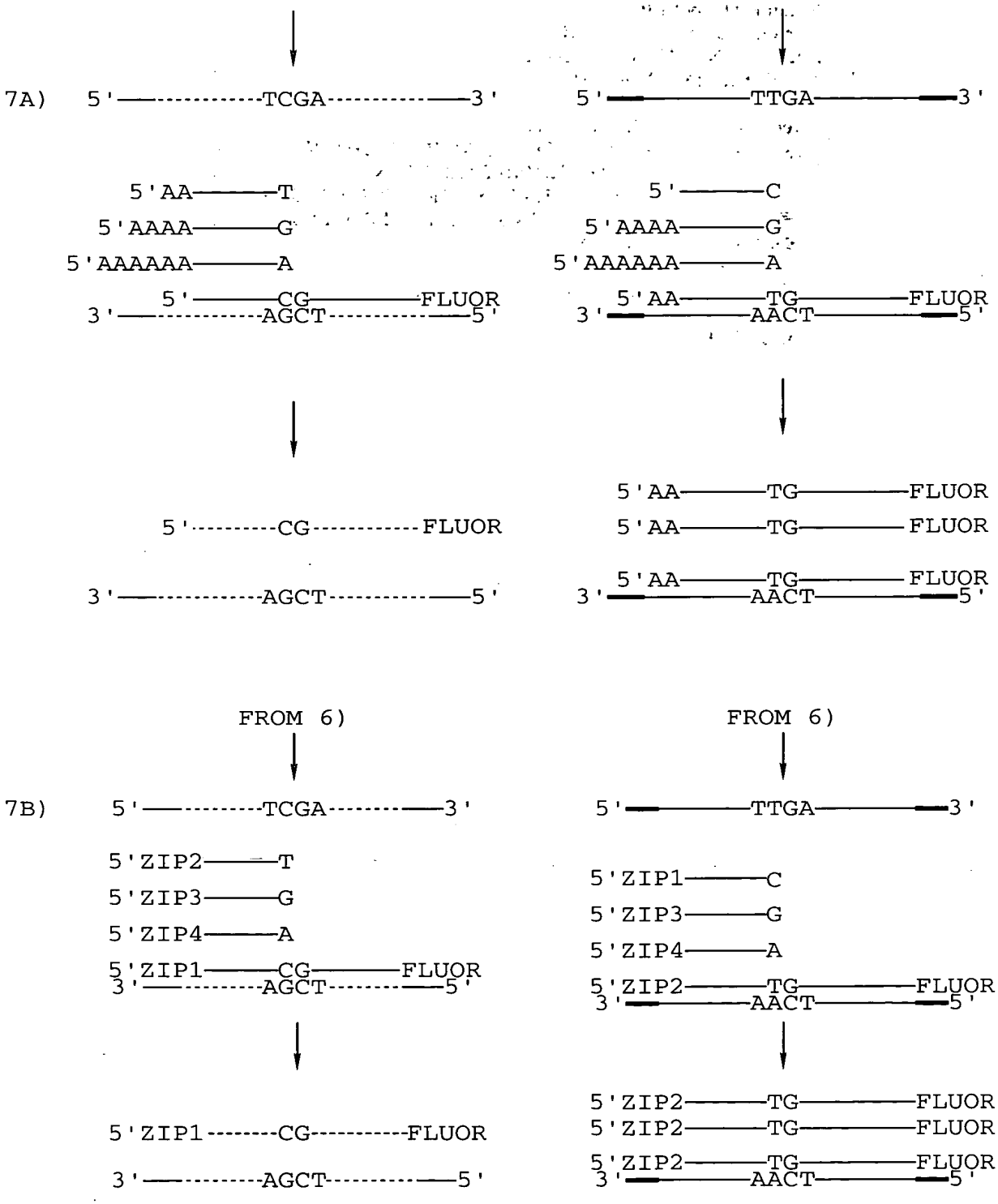


*FIG. 1C*

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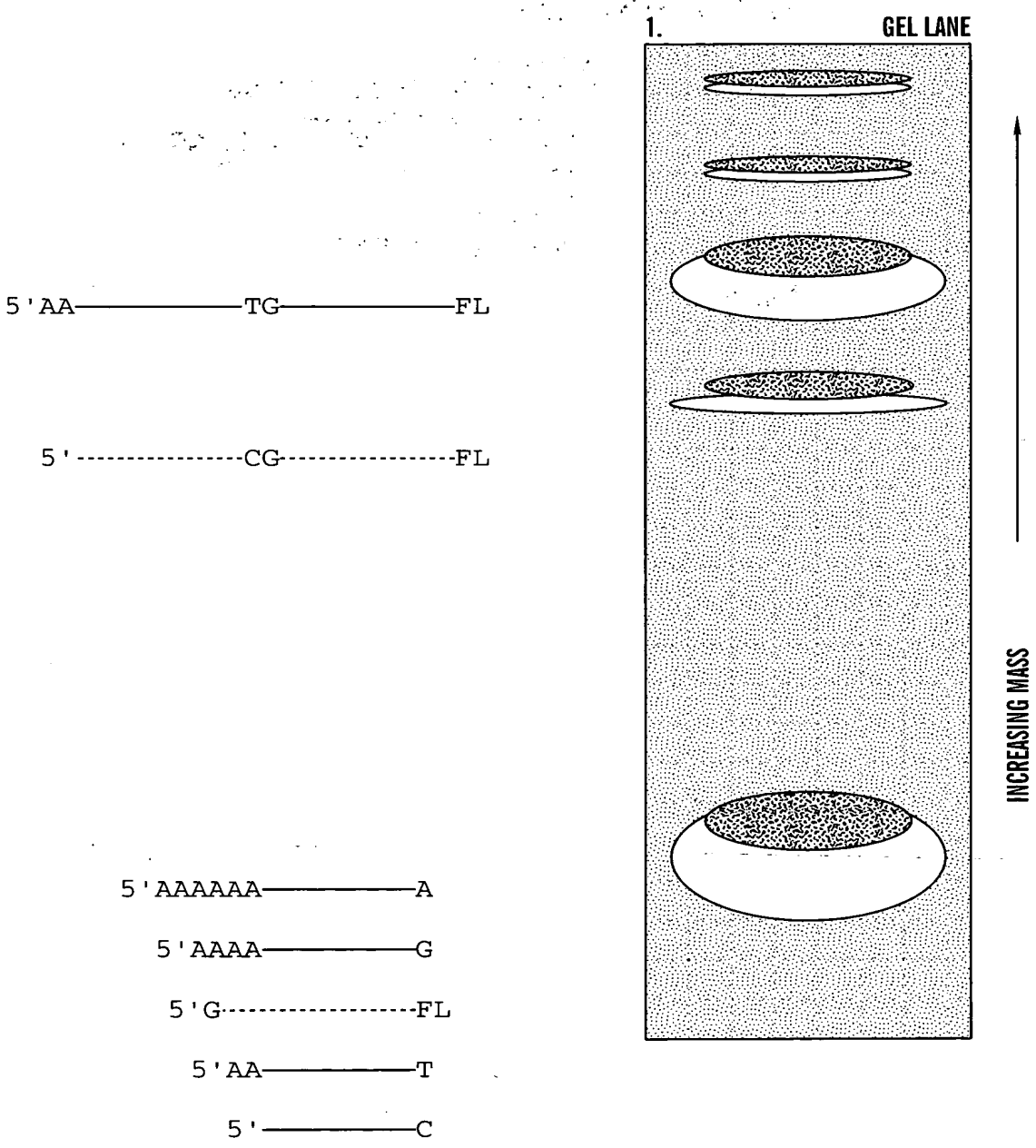


*FIG. 2*

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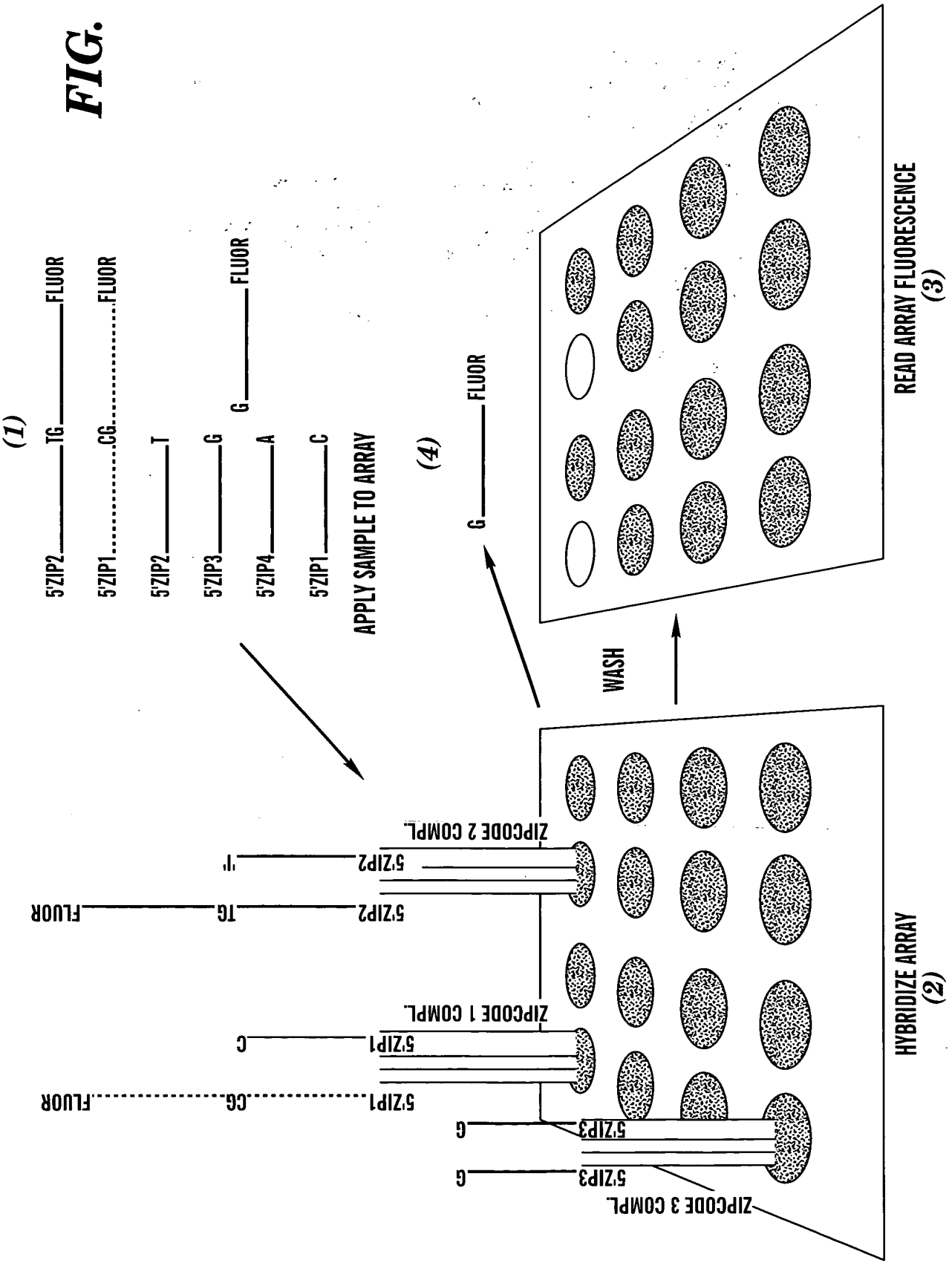
FIG. 3



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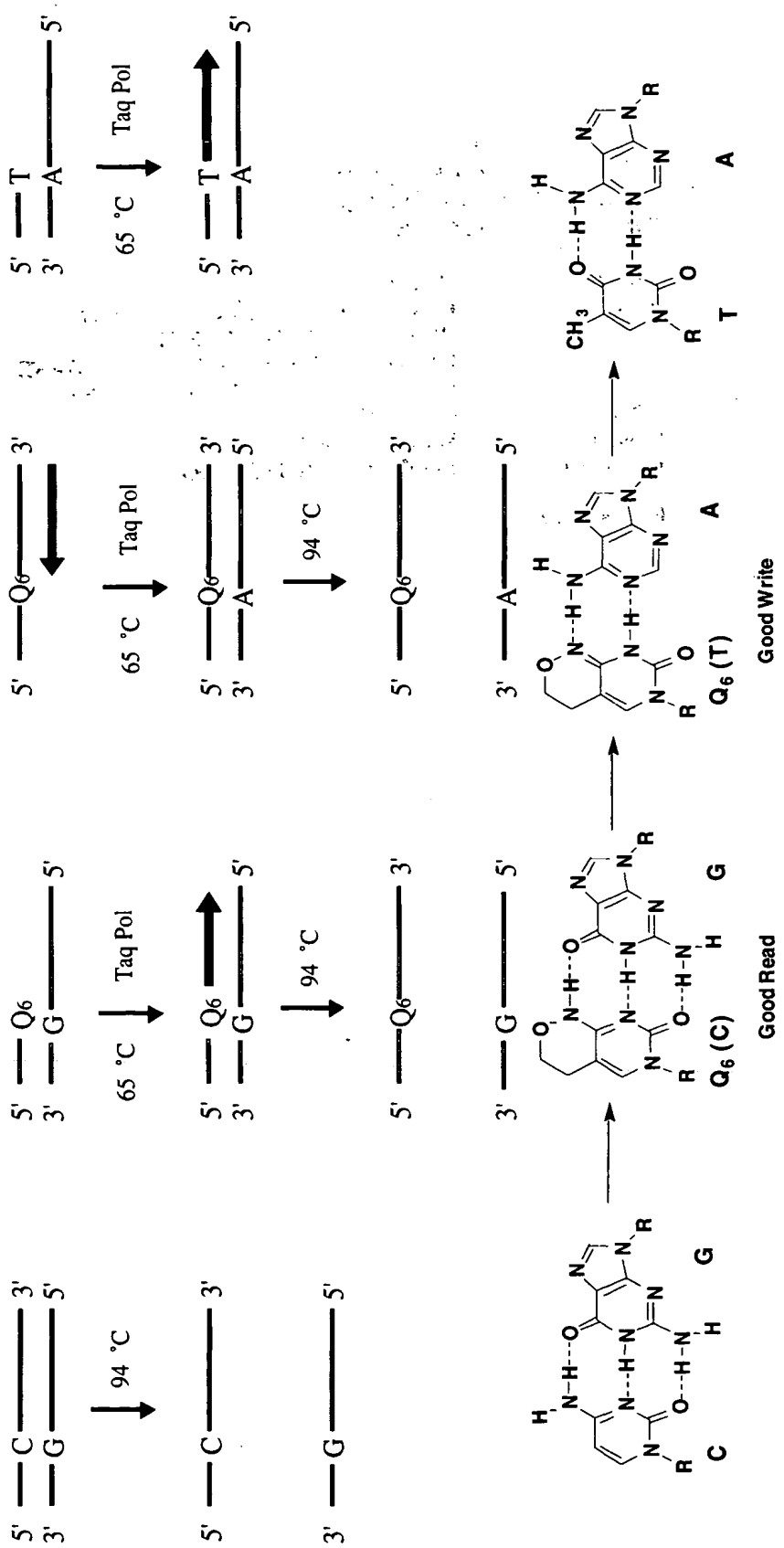


*FIG. 4*

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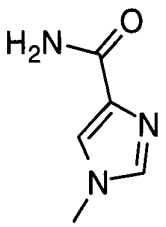
$Q_1$ 

FIG. 5A

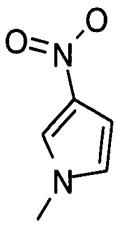
$Q_2$ 

FIG. 5B

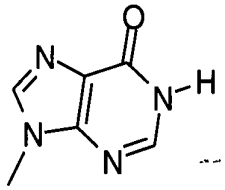
$Q_5$ 

FIG. 5C

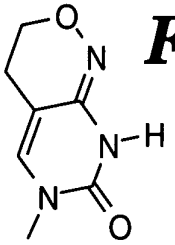
$Q_6$ 

FIG. 5D

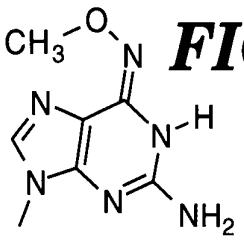
$Q_7$ 

FIG. 5E

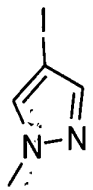
$Q_{16}$ 

FIG. 5F

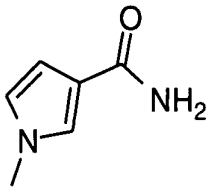
$Q_{18}$ 

FIG. 5G

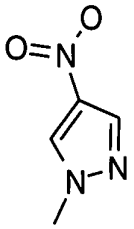
$Q_{19}$ 

FIG. 5H

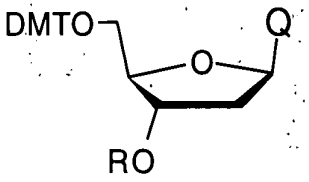
CPG 

FIG. 5I

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**PRIMERS**

codon248

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Ztop            CTT GGA CGA GTT CAT ACG C
P53zip248       CTT GGA CGA GTT CAT ACG CGT TCC TGC ATG GGC GGC ATG A
P53-248X                                T TCT TCC TGC ATG GGC GGC ATG AAX—pol
                                          || ||| ||| ||| ||| ||| ||| ||:
50 bp synthetic                         3' CA AGG AGC TAC CCG CCG TAC TTG GCC TCC GGG TAG GAG TGG TAG TAG TGT 5' (-)
duplex DNA                              5' GT TCC TGC ATG GGC GGC ATG AAC CGG AGG CCC ATC CTC ACC ATC ATC ACA 3' (+)
                                                                    :  ||| ||| ||| ||| ||| ||| ||| |||
p53-248XR                                                       pol—X TCC GGG TAG GAG TGG TAG TAG TCT T
p53zip248R                                                            C GGG TAG GAG TGG TAG TAG TGC ACC GCT GGG TCA AAC G
Zbot                                                                                    C ACC GCT GGG TCA AAC G
```

*FIG. 6A*

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REPLACEMENT SHEET

**PRIMERS**

codon248

```
Ztop              CTT GGA CGA GTT CAT ACG C
P53zip248T        CTT GGA CGA GTT CAT ACG CGT TCC TGC ATG GGC GGC ATG AAT
P53-248Q_N                                T TCT TCC TGC ATG GGC GGC ATG AAQ_N→pol
                                            || ||| ||| ||| ||| ||| ||| ||:
50 bp synthetic                           3' CA AGG AGC TAC CCG CCG TAC TTG GCC TCC GGG TAG GAG TGG TAG TAG TGT 5'  (-)
duplex DNA                                5' GT TCC TGC ATG GGC GGC ATG AAC CGG AGG CCC ATC CTC ACC ATC ATC ACA 3'  (+)
                                                                          :  ||| ||| ||| ||| ||| ||| ||| |||
p53-248 Q_NR                                                    pol←  Q_N TCC GGG TAG GAG TGG TAG TAG TCT T
p53zip248TR                                                           T TCC GGG TAG GAG TGG TAG TAG TGC ACC GCT GGG TCA AAC G
Zbot                                                                                C ACC GCT GGG TCA AAC G
```

*FIG. 6B*

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REPLACEMENT SHEET

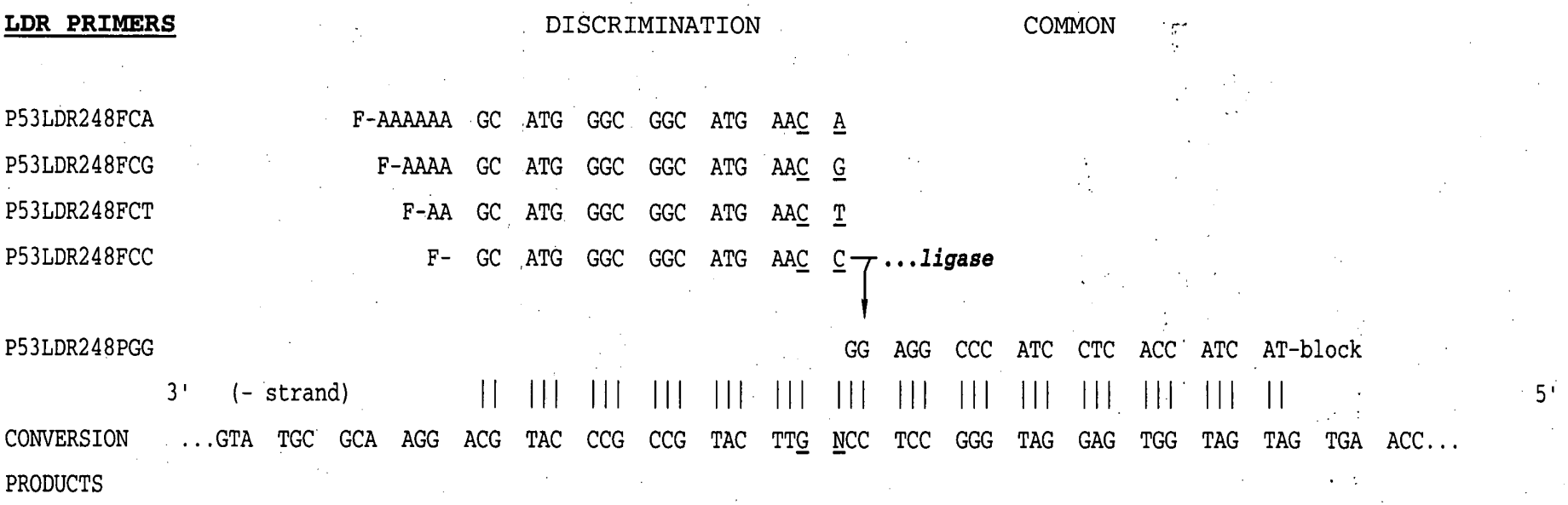


*FIG. 6C*

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| Template | CCGG | | CTGG | | CGGG | | CAGG | | TCGA | | GCGC | | ACGT | | CATG | | CGCG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Expctd prod | CCGG | | CTGG | | CGGG | | CAGG | | CCGG | | CCGG | | CCGG | | CATG | | CGCG | |
| primer 3' end | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ | C | $Q_6$ |
| 1st base | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C |
| 2nd base | C | C | T | T | G | G | A | A | **G** | C | **G** | **G** | **G** | **G** | A | A | G | G |
| minor 2nd base prod | | | | | | | | | t | | t | t<br>c | T | T<br>c<br>c | | | | |
| LANE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

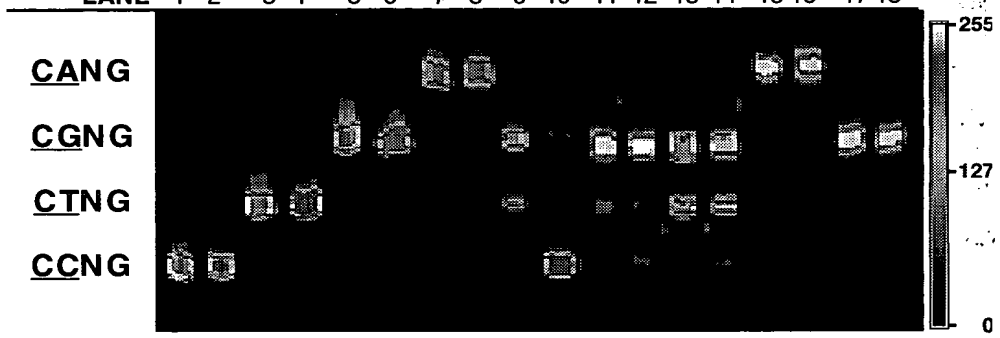


*FIG. 7A*

| Template | CCGG | | CTGG | | CGGG | | CAGG | | TCGA | | GCGC | | ACGT | | CATG | | CGCG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Expctd prod | TCGA | | TTGA | | TGGA | | TAGA | | TCGA | | TCGA | | TCGA | | TATA | | TGCA | |
| primer 3' end | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ | T | $Q_6$ |
| 1st base | T | T | T | T | T | T | T | T | T | T | T | T | T | T | T | T | T | T |
| 2nd base | ? | C | ? | T | ? | G | ? | A | C | C | c | C | ? | C | ? | A | ? | G |
| minor 2nd base prod | | | | | g | | | | | | ? | ? | c | ? | g | | g | |
| LANE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

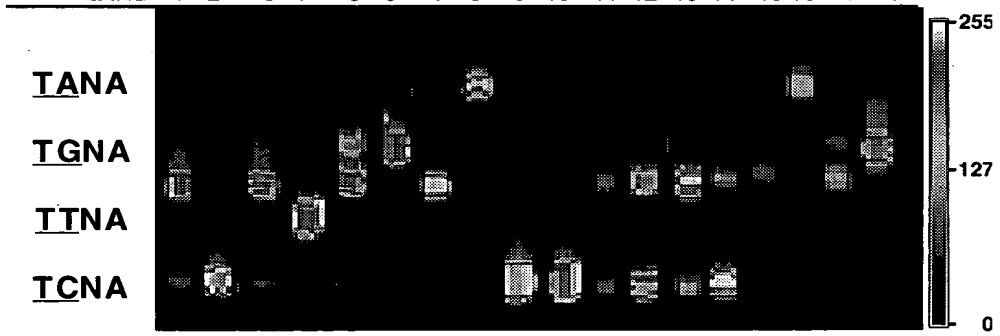


*FIG. 7B*

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| Template | CCGG | CTGG | CGGG | CAGG | TCGA | GCGC | ACGT | CATG | CGCG |
|---|---|---|---|---|---|---|---|---|---|
| Exptd prod | GCGC | GTGC | GGGC | GAGC | GCGC | GCGC | GCGC | GATC | GGCC |
| primer 3' end | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ | G $Q_5$ $Q_7$ |
| 1st base | G G G | G G G | G G G | G G G | G G G | G G G | G G G | G G G | G G G |
| 2nd base | C C C | **C C C** | **C C C** | **C C C** | C C C | C C C | C C C | C C C | ? ? ? |
| minor 2nd base prod | | t t t | g g | A A a | | | | | |
| LANE | 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12 | 13 14 15 | 16 17 18 | 19 20 21 | 22 23 24 | 25 26 27 |

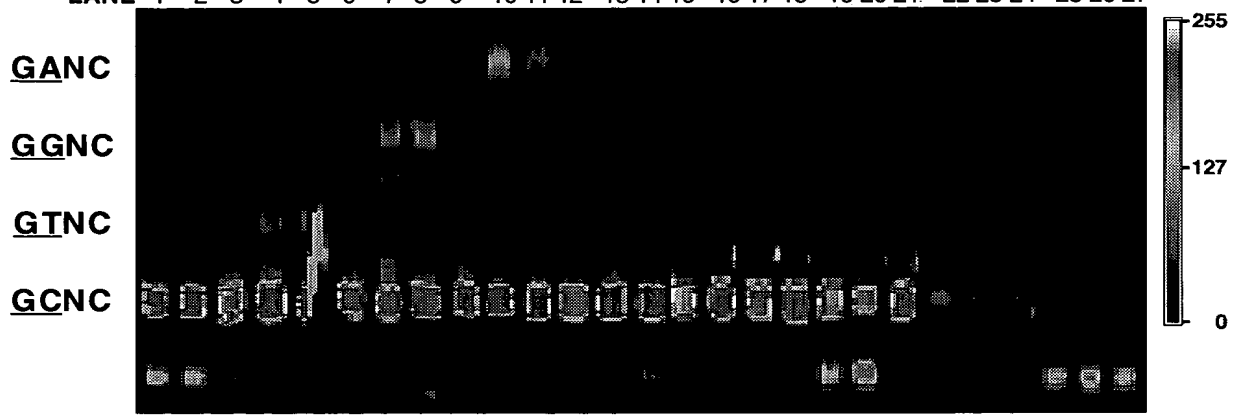


*FIG. 8A*

| Template | CCGG | CTGG | CGGG | CAGG | TCGA | GCGC | ACGT | CATG | CGCG |
|---|---|---|---|---|---|---|---|---|---|
| Exptd prod | ACGT | ATGT | AGGT | AAGT | ACGT | ACGT | ACGT | AATT | AGCT |
| primer 3' end | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ | A $Q_7$ $Q_5$ |
| 1st base | A A A | A A A | A A A | A A A | A A A | A A A | A A A | A A A | A A A |
| 2nd base | C C C | **C C C** | **C C C** | **C C C** | C C C | C C C | C C C | **C C C** | **c C c** |
| minor 2nd base prod | ? | | ? | | | | | | |
| LANE | 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12 | 13 14 15 | 16 17 18 | 19 20 21 | 22 23 24 | 25 26 27 |

*FIG. 8B*

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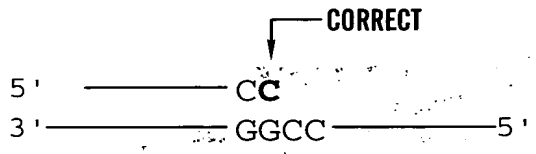


FIG. 9A

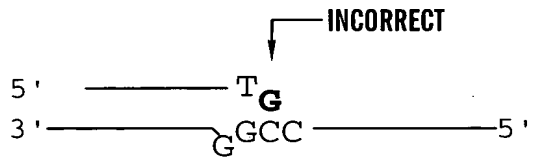


FIG. 9B

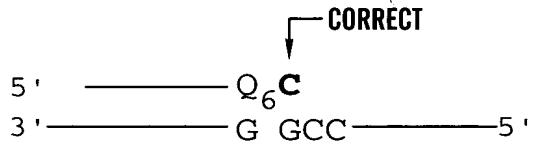


FIG. 9C

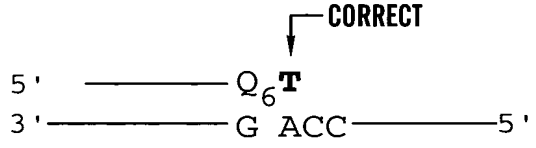


FIG. 9D

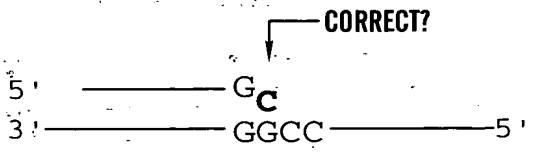


FIG. 9E

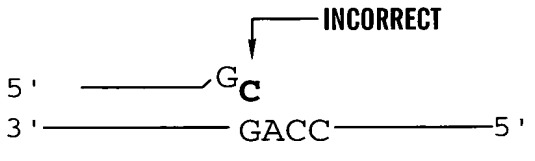


FIG. 9F

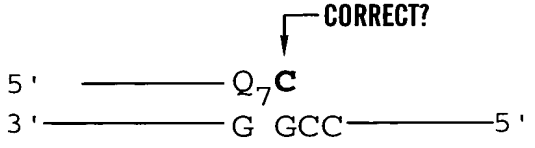


FIG. 9G

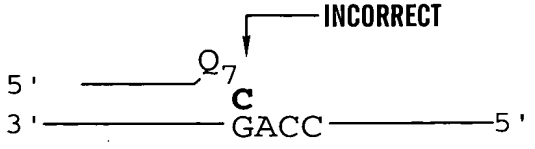


FIG. 9H

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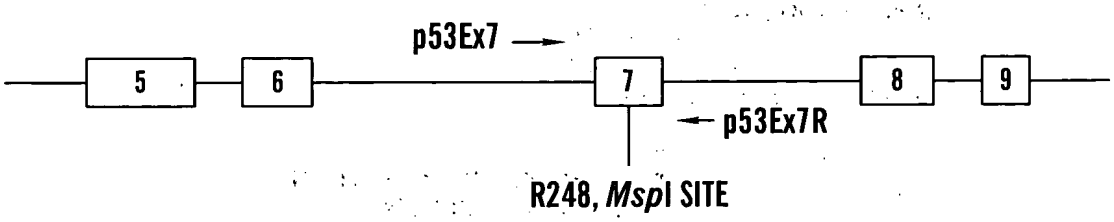



FIG. 10A

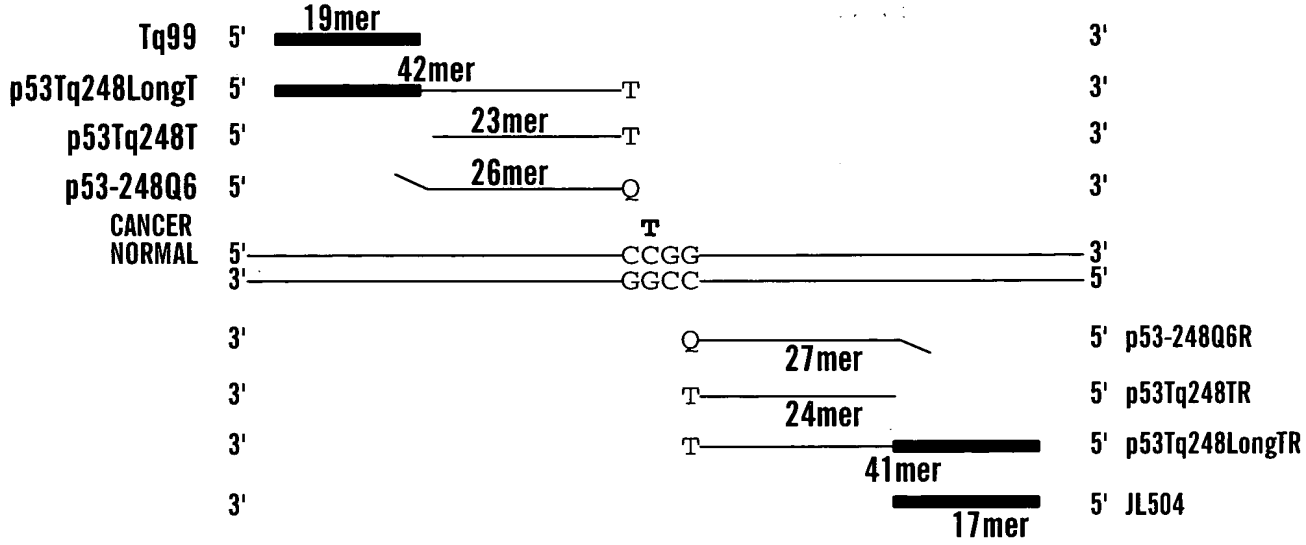
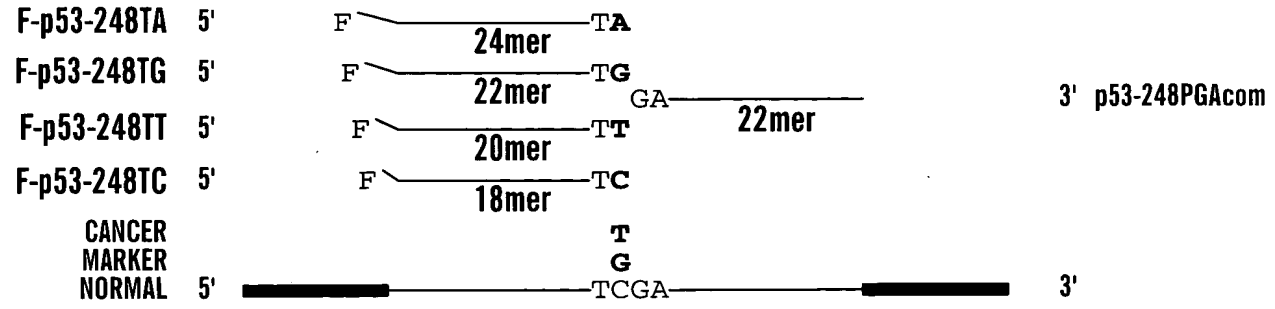



FIG. 10B




CODON 248 CONVERTED TO A *Taq*I SITE

FIG. 10C

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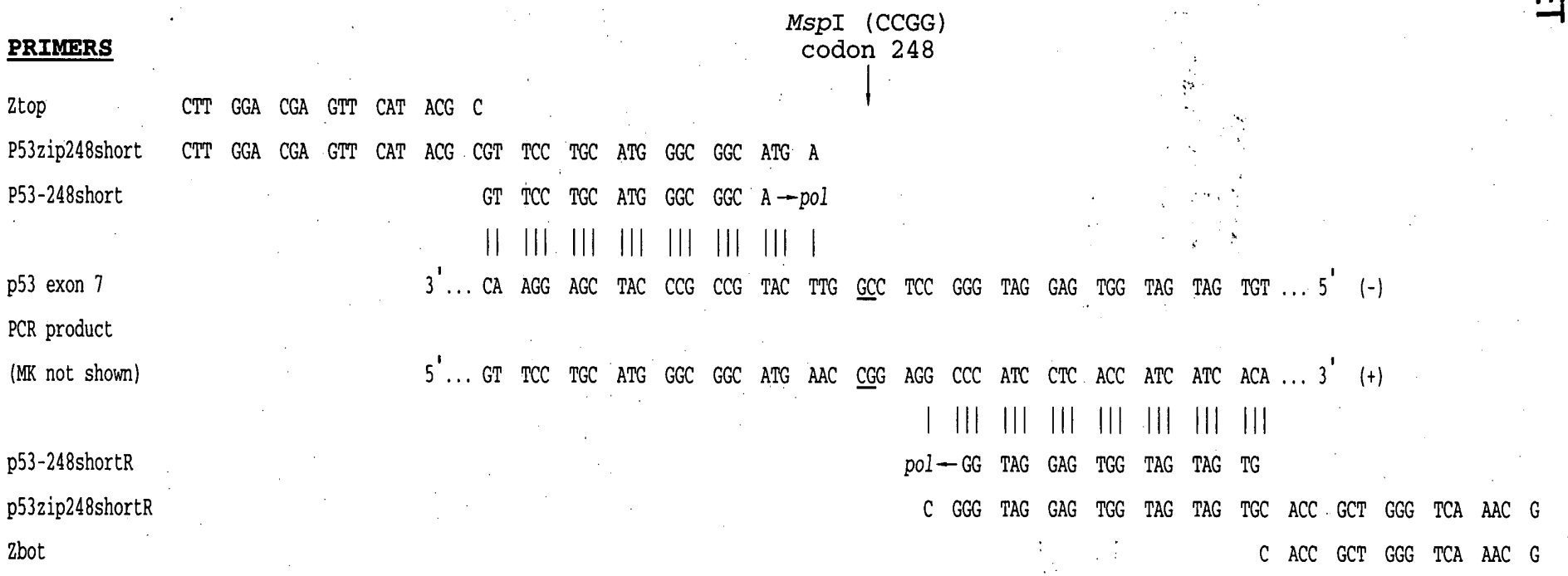


*FIG. 11A*

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REPLACEMENT SHEET

**PRIMERS**

*Msp*I (CCGG)
codon 248

```
Ztop          CTT GGA CGA GTT CAT ACG C
P53zip248T    CTT GGA CGA GTT CAT ACG CGT TCC TGC ATG GGC GGC ATG AAT
P53Taq248T                            GT  TCC TGC ATG GGC GGC ATG AAT
P53Taq248Q6                         TTCT  TCC TGC ATG GGC GGC ATG AAQ6—pol
                                      |   ||| ||| ||| ||| ||| ||| ||:
50 bp synthetic                     3' CA  AGG AGC TAC CCG CCG TAC TTG GCC TCC GGG TAG GAG TGG TAG TAG TGT 5'  (-)
duplex DNA, or
PCR product                         5' GT  TCC TGC ATG GGC GGC ATG AAC CGG AGG CCC ATC CTC ACC ATC ATC ACA 3'  (+)
P53Taq248Q6R                                                        :  ||| ||| ||| ||| ||| ||| ||| |:
                                                          pol—Q6    TCC GGG TAG GAG TGG TAG TAG TCTT
p53Taq248TR                                                  T      TCC GGG TAG GAG TGG TAG TAG TG
p53zip248TR                                                  T      TCC GGG TAG GAG TGG TAG TAG TGC ACC GCT GGG TCA AAC G
Zbot                                                                                          C  ACC GCT GGG TCA AAC G
```

***FIG. 11B***

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JAN 25 2006
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JC48



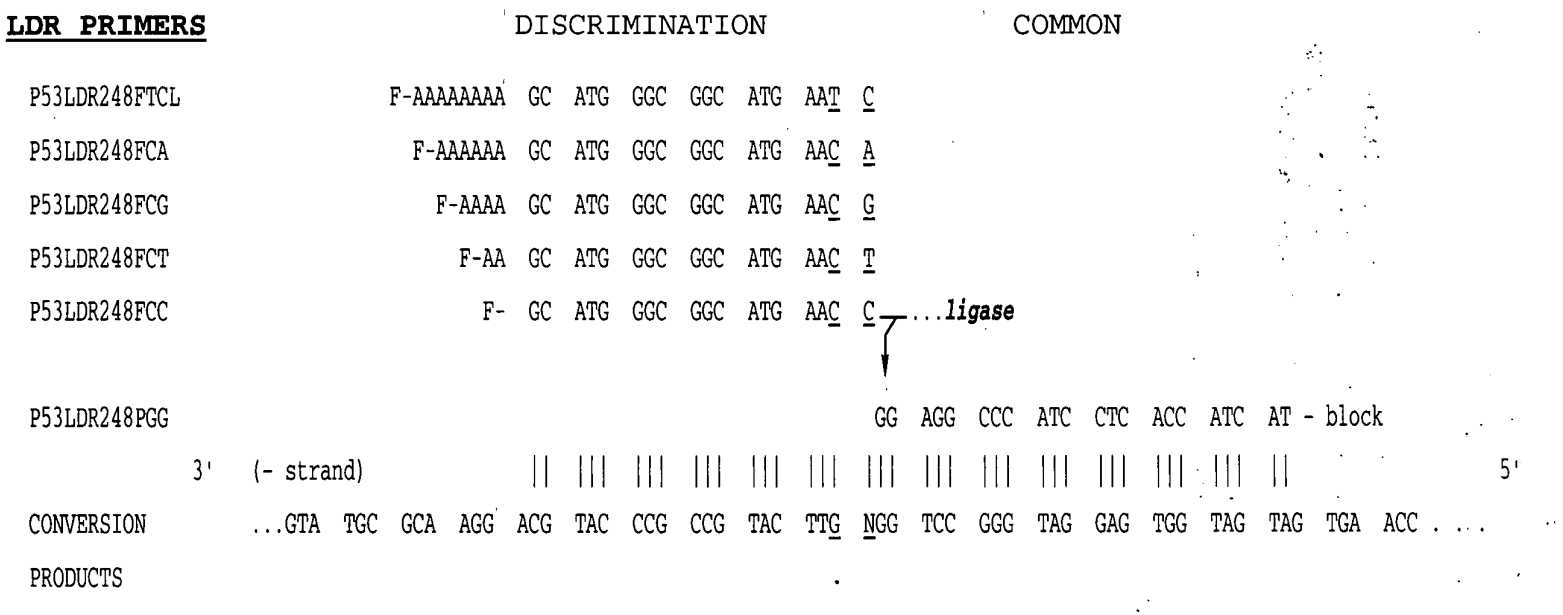


*FIG. 11C*

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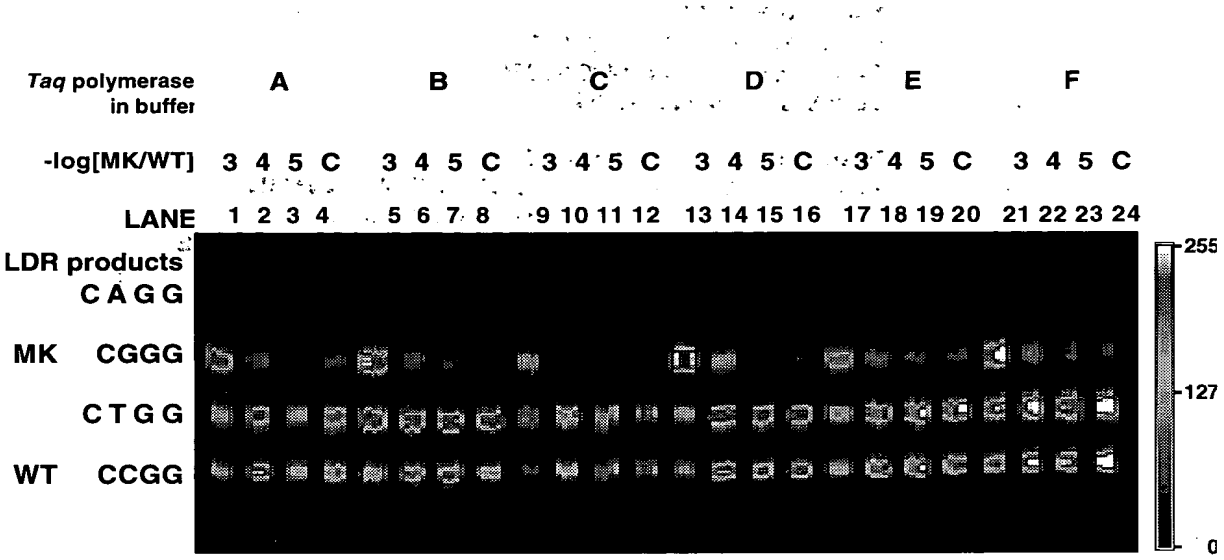


*FIG. 12A*

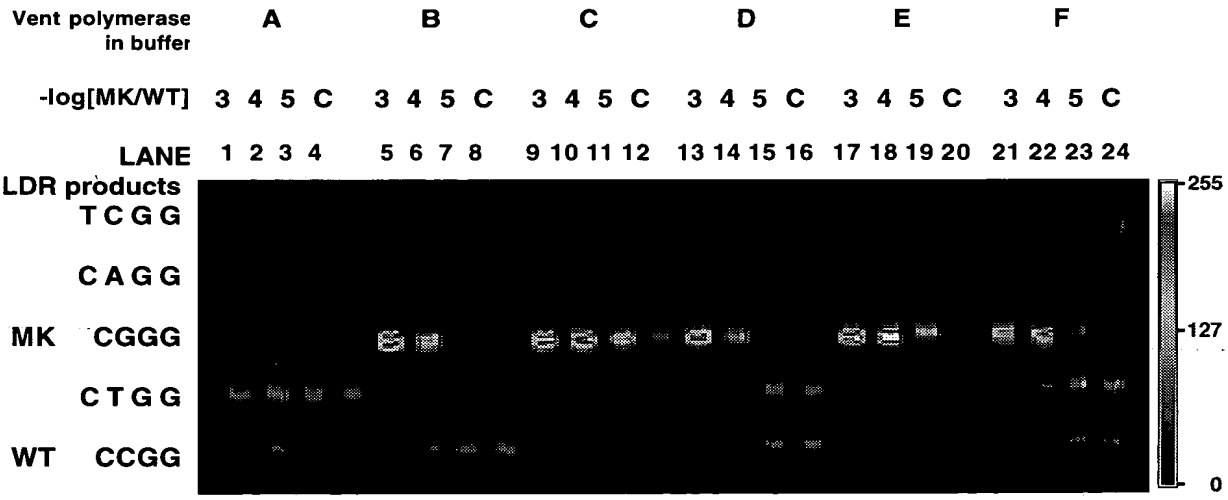


*FIG. 12B*

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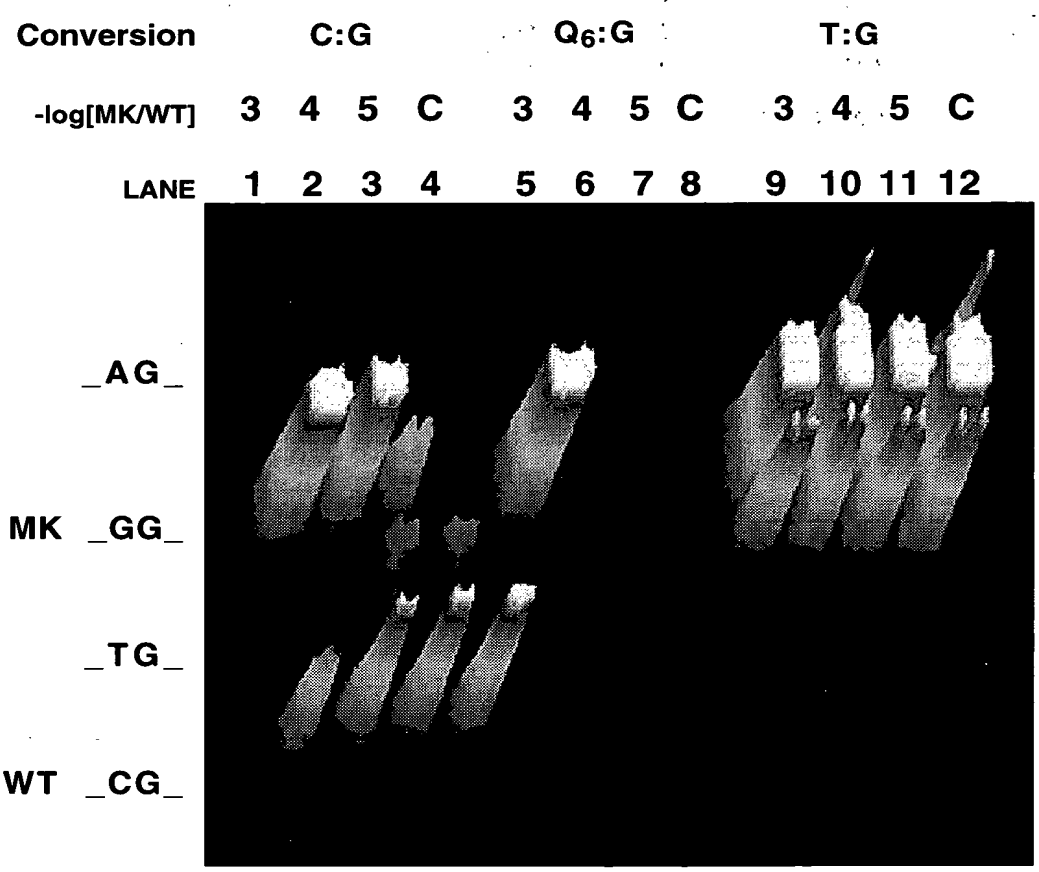


*FIG. 13*

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